

504 625 + 0.914

Work Order ID 104605

July-12-13 10:30:34 AM

\*104605\*

Page 1

Item ID: D2282-3

Accept

\*N900040100\*

Setup Start

\*NS1\*

Revision ID:

Stop

\*NS2\*

Item Name: Tube

Start Date: 7/12/13 Start Qty: 30.00

\*30\*

Cust Item ID:

Required Date: 7/12/13 Req'd Qty: 30.00

\*30\*

Customer:

Reference:

Approvals:	Process Plan: <u>ML5</u>	Date: <u>13-07-15</u>	Tooling:	Date:	Run	Start	*NR1*
QC:		Date:	SPC (Y/N):	Date:	Stop		*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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D2282	Rev E	0.00				
100						
<b>*100*</b>	Hardinge CNC LATHE SMALL					
Hardinge	Memo	0.00				
Hardinge CNC Lathe Small	1-Turn as per Dwg D2282 and Folio FA188 2-Deburr					

110	QC2- Inspect parts off machine FAI/FAIB	0.00				
<b>*110*</b>						
QC	Memo	0.00				
Quality Control						

120	QC8- Inspect parts - second check	0.00				
<b>*120*</b>						
QC	Memo	0.00				
Quality Control						

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_

Date: \_\_\_\_\_

Work Order update only 

Work Order: _____	DISPOSITION	AGAINST DEPARTMENT/PROCESS							
Part No. _____	Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>				
NCR No. _____	Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>				
	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>				
	Suspected Unapproved <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>					

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

Landing Gear	General									
	<input type="checkbox"/>	Bending	<input type="checkbox"/>	Folio/Program	<input type="checkbox"/>	Outside Dimensions	<input type="checkbox"/>	Pressure/Forced		
	<input type="checkbox"/>	Centre Not Concentric	<input type="checkbox"/>	BOM/Route	<input type="checkbox"/>	Grain	<input type="checkbox"/>	Over/Under tolerance	<input type="checkbox"/>	Set-up
	<input type="checkbox"/>	Cracks	<input type="checkbox"/>	Broken/Damage/Defect	<input type="checkbox"/>	Hardware	<input type="checkbox"/>	Part Incorrect	<input type="checkbox"/>	Temperature/Cure
	<input type="checkbox"/>	Crimp/Kink/Ripple/Wave	<input type="checkbox"/>	Burr	<input type="checkbox"/>	Inspection Incomplete/Unqualified	<input type="checkbox"/>	Part Lost/Missing	<input type="checkbox"/>	Weld
	<input type="checkbox"/>	Cuffs	<input type="checkbox"/>	Contamination	<input type="checkbox"/>	Instructions Incomplete/Unclear	<input type="checkbox"/>	Part Moved	<input type="checkbox"/>	Wrong Stock Pulled
	<input type="checkbox"/>	Crushing	<input type="checkbox"/>	Countersink	<input type="checkbox"/>	Misaligned/off center	<input type="checkbox"/>	Positioned Wrong	<input type="checkbox"/>	Other
	<input type="checkbox"/>	Heat Treat	<input type="checkbox"/>	Cut Too Short	<input type="checkbox"/>	Mislabeled	<input type="checkbox"/>	Power Loss/Surge	<input type="checkbox"/>	
	<input type="checkbox"/>	Inspection Strip in Tube	<input type="checkbox"/>	Drawing	<input type="checkbox"/>	Misread	<input type="checkbox"/>		<input type="checkbox"/>	
	<input type="checkbox"/>	Marks/Chatter	<input type="checkbox"/>	Drill Holes	<input type="checkbox"/>	Off-set	<input type="checkbox"/>		<input type="checkbox"/>	
	<input type="checkbox"/>	Turning Sequence	<input type="checkbox"/>	Finish	<input type="checkbox"/>	Out of Calibration	<input type="checkbox"/>		<input type="checkbox"/>	
	<input type="checkbox"/>	Wave/Twist in Tube	<input type="checkbox"/>	Fit/Function	<input type="checkbox"/>	Out of Sequence	<input type="checkbox"/>		<input type="checkbox"/>	

Work Order ID 104605

July-12-13 10:30:34 AM

\*104605\*

Page 2

Item ID: D2282-3

Accept

\*N900040100\*

Setup Start

\*NS1\*

Revision ID:

Item Name: Tube

Stop

\*NS2\*

Start Date: 7/12/13

Start Qty: 30.00

\*30\*

Cust Item ID:

Required Date: 7/12/13

Req'd Qty: 30.00

\*30\*

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

\*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop

\*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

130

Identify as per dwg & Stock Location: W/11

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

\*130\*

Packaging

Packaging

Memo

\*\*\*\*\*STOCK IN LARGE FAB\*\*\*\*\*

0.00

0.00

0.00

30

13-07-23

140

QC21- Final Inspection - Work Order Release

0.00

\*140\*

QC

Quality Control

Memo

0.00

MCD 13-07-26

MF

13-7-24

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only 

Work Order: _____	DISPOSITION	AGAINST DEPARTMENT/PROCESS					
Part No. _____	Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>		
NCR No. _____	Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>		
	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>		
	Suspected Unapproved <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>			

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

Landing Gear	General				
	Bending <input type="checkbox"/>	Bend <input type="checkbox"/>	Folio/Program <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>
	Centre Not Concentric <input type="checkbox"/>	BOM/Route <input type="checkbox"/>	Grain <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Set-up <input type="checkbox"/>
	Cracks <input type="checkbox"/>	Broken/Damage/Defect <input type="checkbox"/>	Hardware <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>
	Crimp/Kink/Ripple/Wave <input type="checkbox"/>	Burrs <input type="checkbox"/>	Inspection Incomplete/Unqualified <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Weld <input type="checkbox"/>
	Cuffs <input type="checkbox"/>	Contamination <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Moved <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>
	Crushing <input type="checkbox"/>	Countersink <input type="checkbox"/>	Misaligned/off center <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>	
	Heat Treat <input type="checkbox"/>	Cut Too Short <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>	
	Inspection Strip in Tube <input type="checkbox"/>	Drawing <input type="checkbox"/>	Misread <input type="checkbox"/>		
	Marks/Chatter <input type="checkbox"/>	Drill Holes <input type="checkbox"/>	Off-set <input type="checkbox"/>		
	Turning Sequence <input type="checkbox"/>	Finish <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>		
	Wave/Twist in Tube <input type="checkbox"/>	Fit/Function <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>		

**Picklist Print**

July-12-13 10:30:34 AM

Page 1

**Work Order ID:** 104605**Parent Item:** D2282-3**Parent Item Name:** Tube**Start Date:** 7/12/13**Required Date:** 7/12/13**Start Qty:** 30.00**Required Qty:** 30.00**Comments:** IPP Rev:A      Removed from 9 Digit      05-12-02 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304TR0.675W.091 304 RD Tube .675 x .091W		Purchased	No			100	f	107.7690	0.1979	6.249474			

Location	Loc Qty	Loc Code
MAT017	107.769	
116386	31.149	
116856	39.464	
117598	6.68	
120633	30.476	

7.75 \$1.64 13/07/22  
DAS  
g u

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only 

Work Order: _____	DISPOSITION			AGAINST DEPARTMENT/PROCESS					
Part No. _____	Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>				
NCR No. _____	Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>				
	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>				
	Suspected Unapproved <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>					

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

## FAULT CATEGORY

Landing Gear		General									
<input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function		<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence		<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled		<input type="checkbox"/> Other		

DART AEROSPACE LTD	Work Order:	104605
Description: Handle Tube	Part Number:	D2282-3
Inspection Dwg: D2282	Rev: E	Page 1 of 1

# FIRST ARTICLE INSPECTION CHECKLIST

## X First Article      Prototype

DAS

Measured by:	44 9.89	Audited by:	SD	Prototype Approval:	N/A
Date:	13/07/22	Date:	13-7-22	Date:	N/A

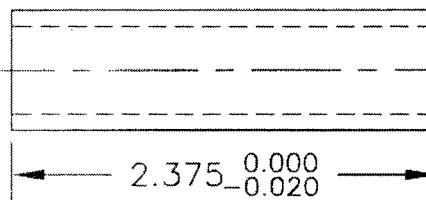
Rev	Date	Change	Revised by	Approved
A	03.11.11	New Issue P/O D350-615-041	KJ/RF	
B	05.04.19	Tolerance changed	KJ/JLM	
C	06.03.15	Dwg Rev update	KJ/JLM	
D	09.10.01	Dimensions updated	KJ	



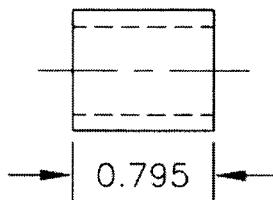


DESIGN BW	DRAWN BY <i>PZ</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>IP</i>	APPROVED <i>10/00</i>	DRAWING NO. D2282	REV. E SHEET 1 OF 2
DATE 05.06.07		TITLE HANDLE TUBES	SCALE 1:1

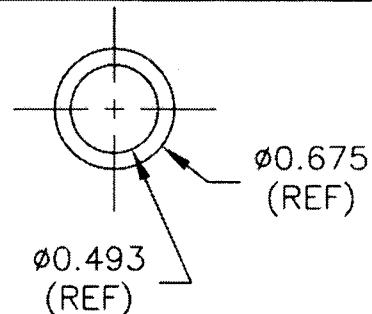
RELEASED  
b5/09/16



D2282-3

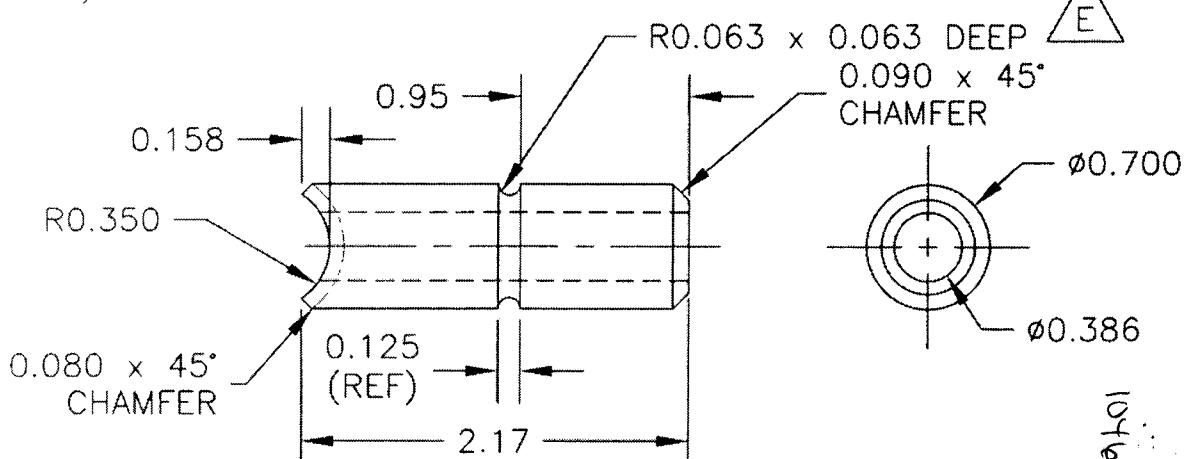


D2282-7



#### D2282-3/-7 TUBE:

- 1) MATERIAL: T304/T316 3/8 SCHEDULE 40 (REF. DART SPEC. M304R0.675W.091)
- 2) BREAK ALL UMARKED SHARP EDGES 0.005 TO 0.010
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED



D2282-5

#### D2282-5 STEM:

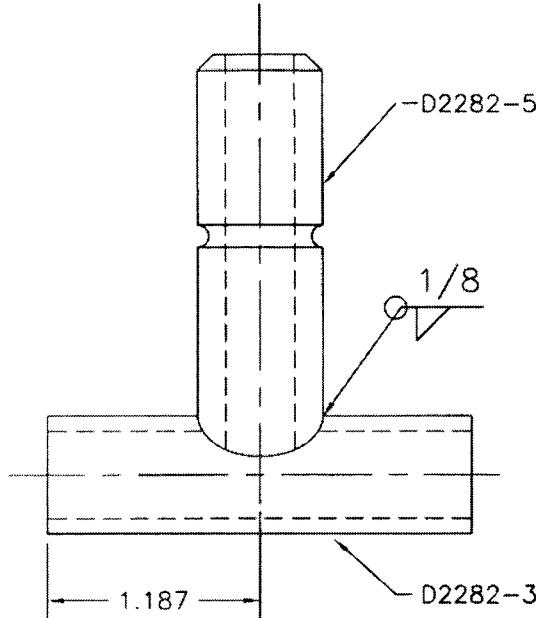
- 1) MATERIAL: AISI 304 STAINLESS STEEL (REF. DART SPEC. M304R0.750)
- 2) BREAK ALL UMARKED SHARP EDGES 0.005 TO 0.010
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

104  
105  
106  
107  
108  
109  
110  
111  
112  
113  
114

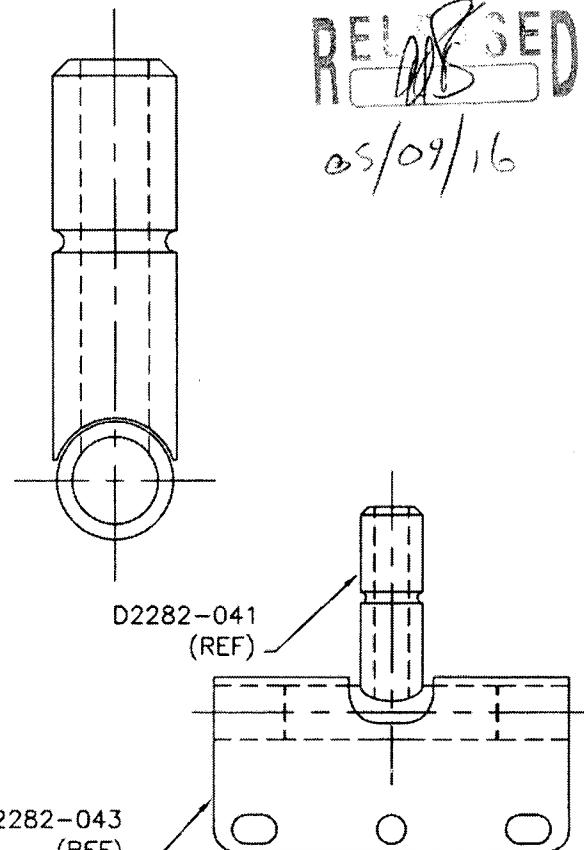
E



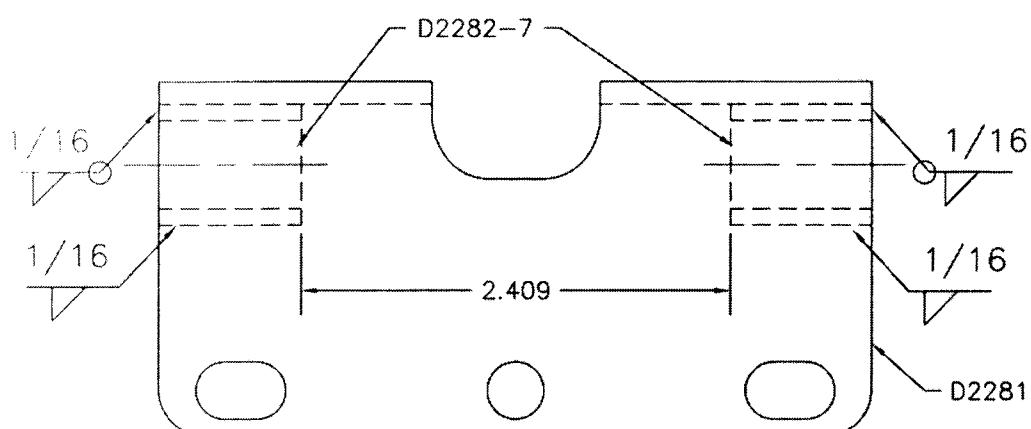
DESIGN BW	DRAWN BY <i>ASB</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>UP</i>	APPROVED <i>ASB</i>	DRAWING NO. D2282	REV. E SHEET 2 OF 2
DATE 05.06.07		TITLE HANDLE TUBES	SCALE 1:1



D2282-041 'T' ASSEMBLY  
WELD ASSEMBLY PER DART QSI 004



GENERAL ASSEMBLY  
SCALE 1:2



D2282-043 SADDLE ASSEMBLY  
WELD ASSEMBLY PER DART QSI 004

10/6/05